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FIG. 1

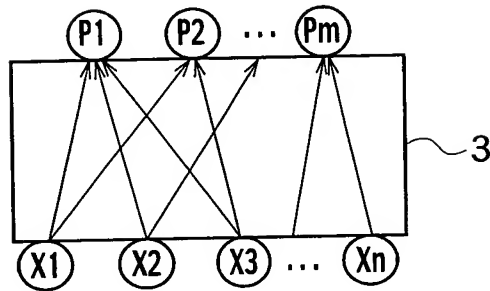


FIG. 2

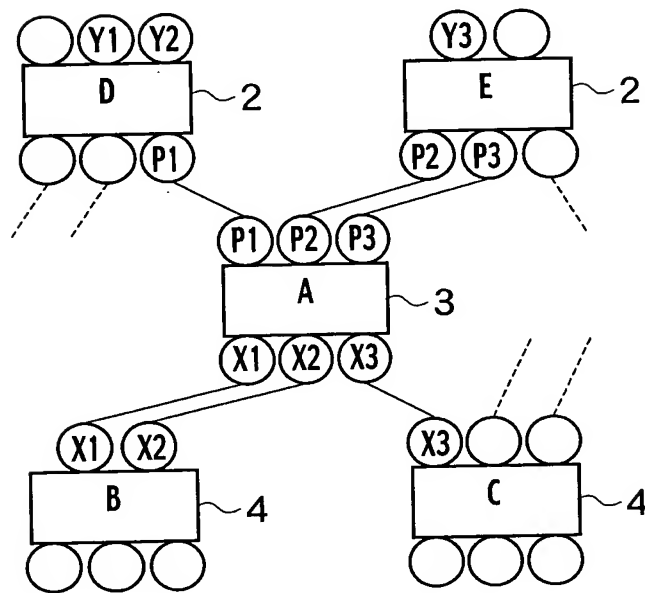
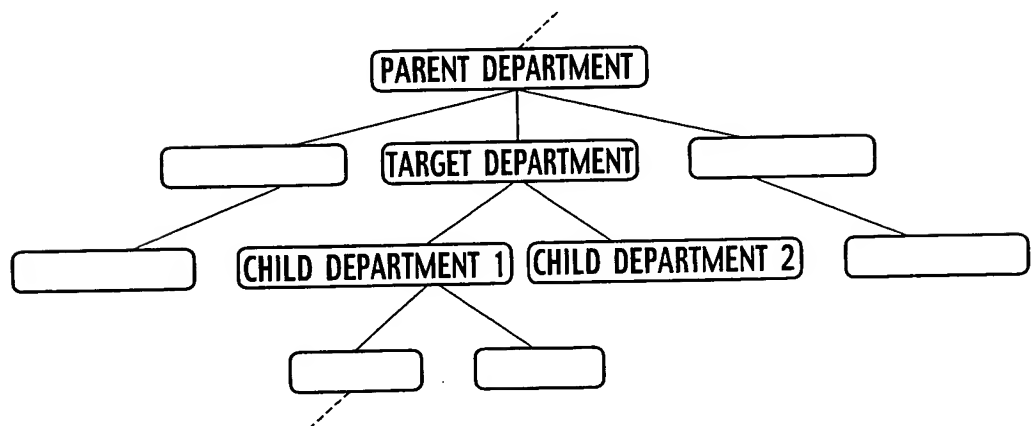


FIG. 3



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**FIG. 4**

PRODUCT ID	PROCESS ID	PROCESS ORDER	MINIMUM PERIOD	MAXIMUM PERIOD	PROCESS OFFSET	RESOURCE ID	RESOURCE USAGE
A	A001	1	0.5	20	0	R01	1
A	A002	2	0.5	20	1	R02	2
B	B001	1	0.5	20	0	R01	1
B	B002	2	0.5	20	1	R02	1
B	B003	3	0.5	20	2	R01	0.5

**FIG. 5**

RESOURCE ID	INSIDE / OUTSIDE CLASSIFICATION
R01	INSIDE RESOURCE
R02	OUTSIDE RESOURCE

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**FIG. 6A**

		a	b	c
PRODUCT ID	TERM	PRICE	PRODUCTION DIRECT COST	MARGINAL PROFIT
P1	1	1	0.5	0.5
	2	1	0.5	0.5
	3	1.5	1	0.5
	4	1.2	0.6	0.6
	5	1	0.5	0.5

**FIG. 6B**

		d	e	f	g
PRODUCT ID	TERM	PLANNED SALES QUANTITY	PLANNED PRODUCTION QUANTITY	FIXED SALES QUANTITY	INVENTORY QUANTITY
P1	1	2	1.5	1	0.5
	2	2	1.8	0.8	1.5
	3	3	2	1	2.5
	4	3	2.5	2	3
	5	2	2	1	4

**FIG. 6C**

		h	i	j	k
PRODUCT ID	TERM	SURPLUS PRODUCTION QUANTITY	UPSTREAM CONSOLIDATED CONTRIBUTION PROFIT	EFFECTIVE SURPLUS PRODUCTION QUANTITY	CONSOLIDATED CONTRIBUTION PROFIT
P1	1	0.3	0.3	0.3	0.6
	2	0.5	0.3	0.3	0.6
	3	0.4	0.3	0.3	0.6
	4	0.6	0.2	0.4	0.5
	5	0.7	0.2	0.6	0.5

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**FIG. 7**

		a	b	c	d
PART ID	TERM	SURPLUS PRODUCTION QUANTITY	UPSTREAM CONSOLIDATED CONTRIBUTION PROFIT	EFFECTIVE SURPLUS PRODUCTION QUANTITY	CONSOLIDATED CONTRIBUTION PROFIT
X1	1	0.4	0.2	0.3	0.4
	2	0.6	0.2	0.3	0.4
	3	0.6	0.2	0.3	0.4
	4	0.7	0.15	0.4	0.3
	5	0.7	0.15	0.6	0.4

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FIG. 8

TERM	DEPARTMENT EXPENDITURE			DEPARTMENT SALES			DEPARTMENT MARGINAL PROFIT			DEPARTMENT CASH FLOW			
	COMMON FIXED COST	TOTAL INVENTORY COST	RESOURCE FIXED COST	SALES PLAN	PRODUCTION PLAN	FIXED SALES	SALES PLAN	PRODUCTION PLAN	FIXED SALES	EXISTING CF	PRODUCTION PLAN CF	SALES PLAN CF	etc
1	0.1	0.01	0.3	0.5	0.5	0.3	0.3	0.3	0.3	0.20	0.20	0.20	-
2	0.1	0.01	0.2	0.5	0.45	0.45	0.2	0.15	0.15	0.29	0.29	0.29	-
3	0.1	0.02	0.2	0.4	0.4	0.4	0.2	0.2	0.2	0.38	0.38	0.38	-
4	0.1	0.01	0.3	0.5	0.45	0.4	0.3	0.25	0.2	0.47	0.47	0.47	-
5	0.1	0.01	0.3	0.6	0.5	0	0.3	0.25	0	0.07	0.07	0.07	-

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**FIG. 9**

ORDER ID	START DATE	END DATE	PRODUCT ID	FIXED QUANTITY FOR PARENT PRODUCTS	REQUESTED QUANTITY OF PARENT PRODUCTS	SURPLUS PRODUCTION QUANTITY FOR PARENT PRODUCTS
A-1	1/1	1/10	A	0	0	0
A-2	1/11	1/20	A	0	2	0
A-3	1/21	1/31	A	0	0	0
B-1	1/1	1/10	B	0	0	0
B-2	1/11	1/20	B	0	0	0
B-3	1/21	1/31	B	0	5	0

**FIG. 10**

RESOURCE ID	START DATE	END DATE	FIXED QUANTITY OF PARTS	DESIRED QUANTITY FOR PARTS	SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R01	1/1	1/10	10	0	0	0
R01	1/11	1/20	10	0	0	0
R01	1/21	1/31	10	0	0	0
R02	1/1	1/10	0	0	2	0
R02	1/11	1/20	0	0	6	0
R02	1/21	1/31	0	0	10	0

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FIG. 11

ORDER ID	PROCESS ID	START DATE	END DATE	OFFSET	RESOURCE ID	QUANTITY	COST
A-1	A001	-	-	0	R01	0	
A-1	A002	1/1	1/10	1	R02	0	
A-2	A001	-	-	0	R01	0	
A-2	A002	1/11	1/20	1	R02	0	
A-3	A001	-	-	0	R01	0	
A-3	A002	1/21	1/31	1	R02	0	
B-1	B001	-	-	0	R01	0	
B-1	B002	-	-	1	R02	0	
B-1	B003	1/1	1/10	2	R01	0	
B-2	B001	-	-	0	R01	0	
B-2	B002	-	-	1	R02	0	
B-2	B003	1/11	1/20	2	R01	0	
B-3	B001	-	-	0	R01	0	
B-3	B002	-	-	1	R02	0	
B-3	B003	1/21	1/31	2	R01	0	

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FIG. 12

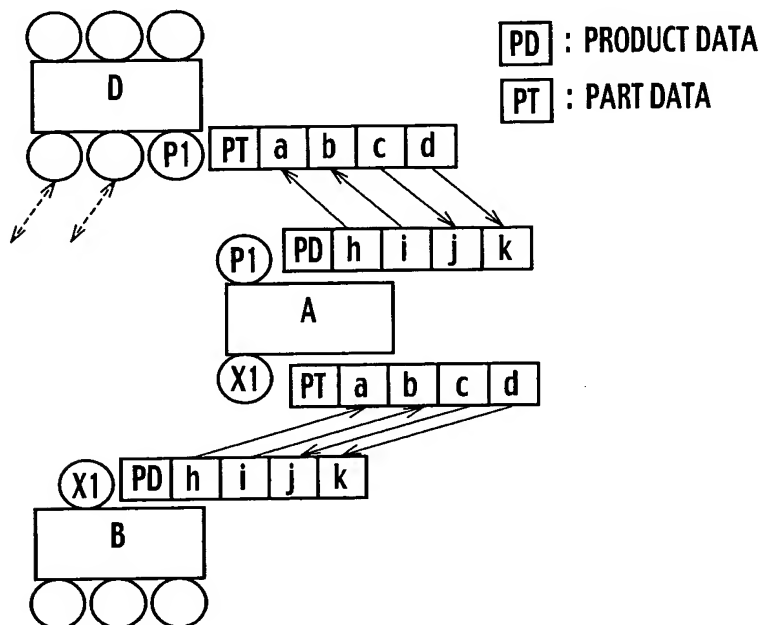
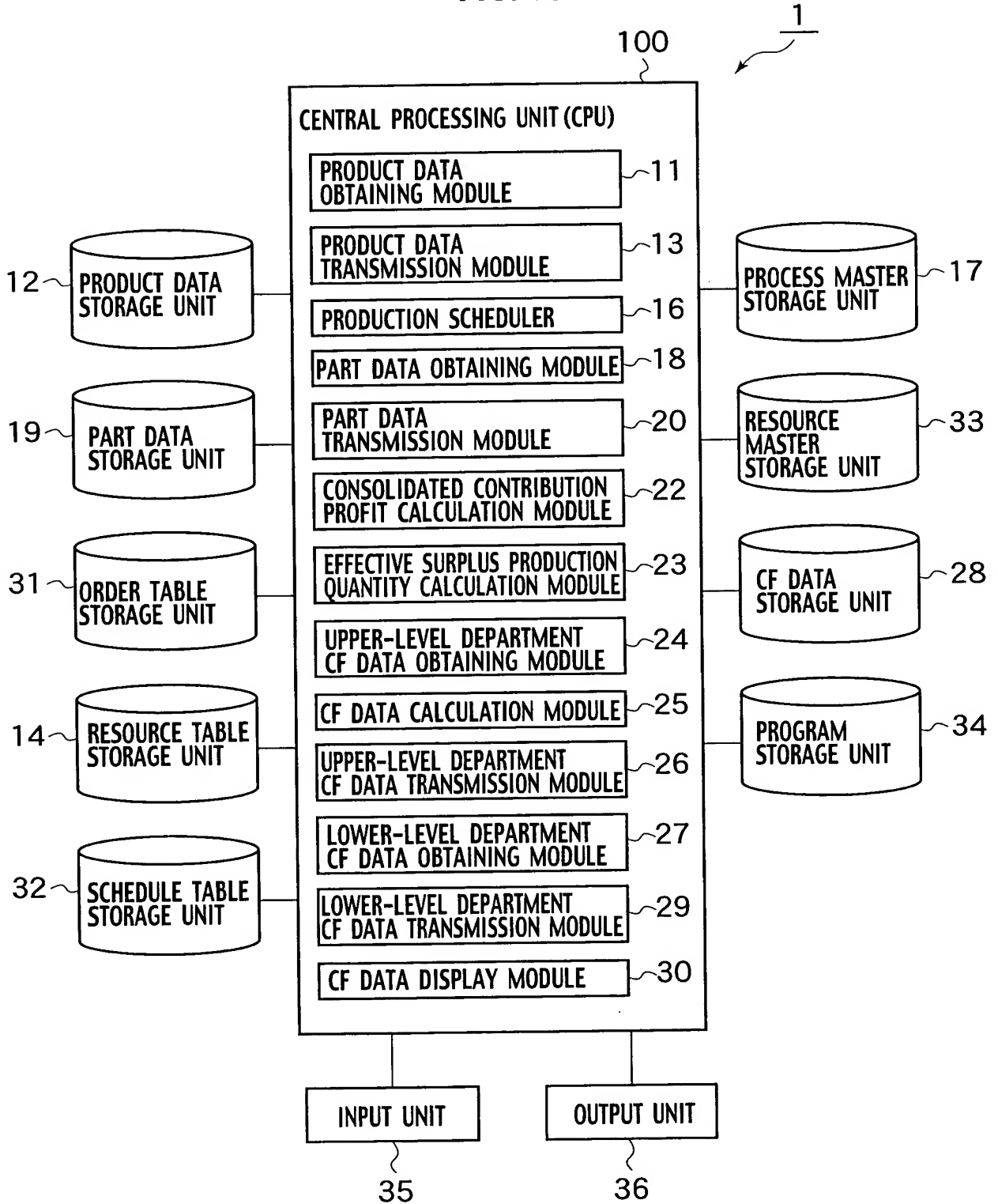


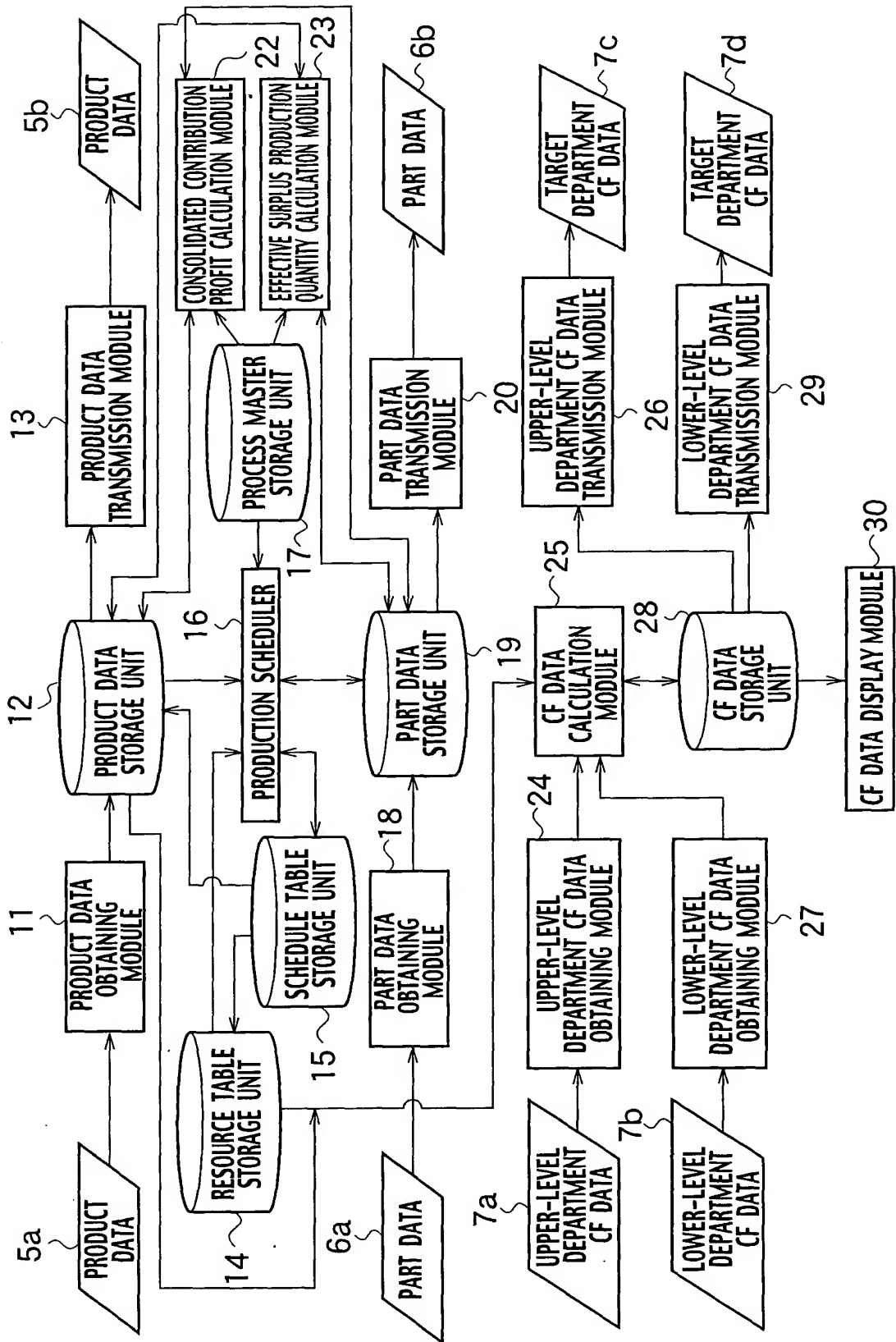


FIG. 13



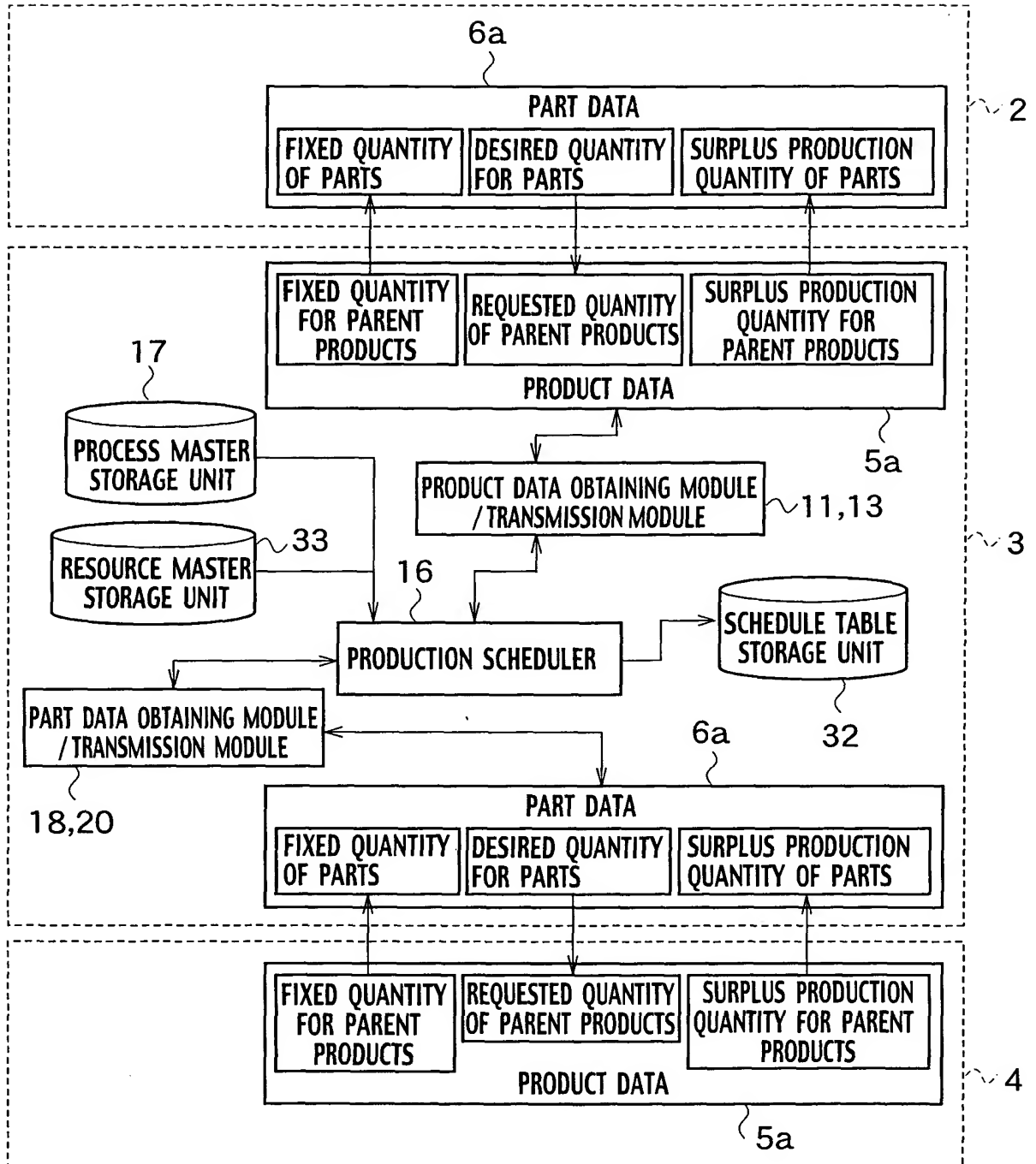
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FIG. 14



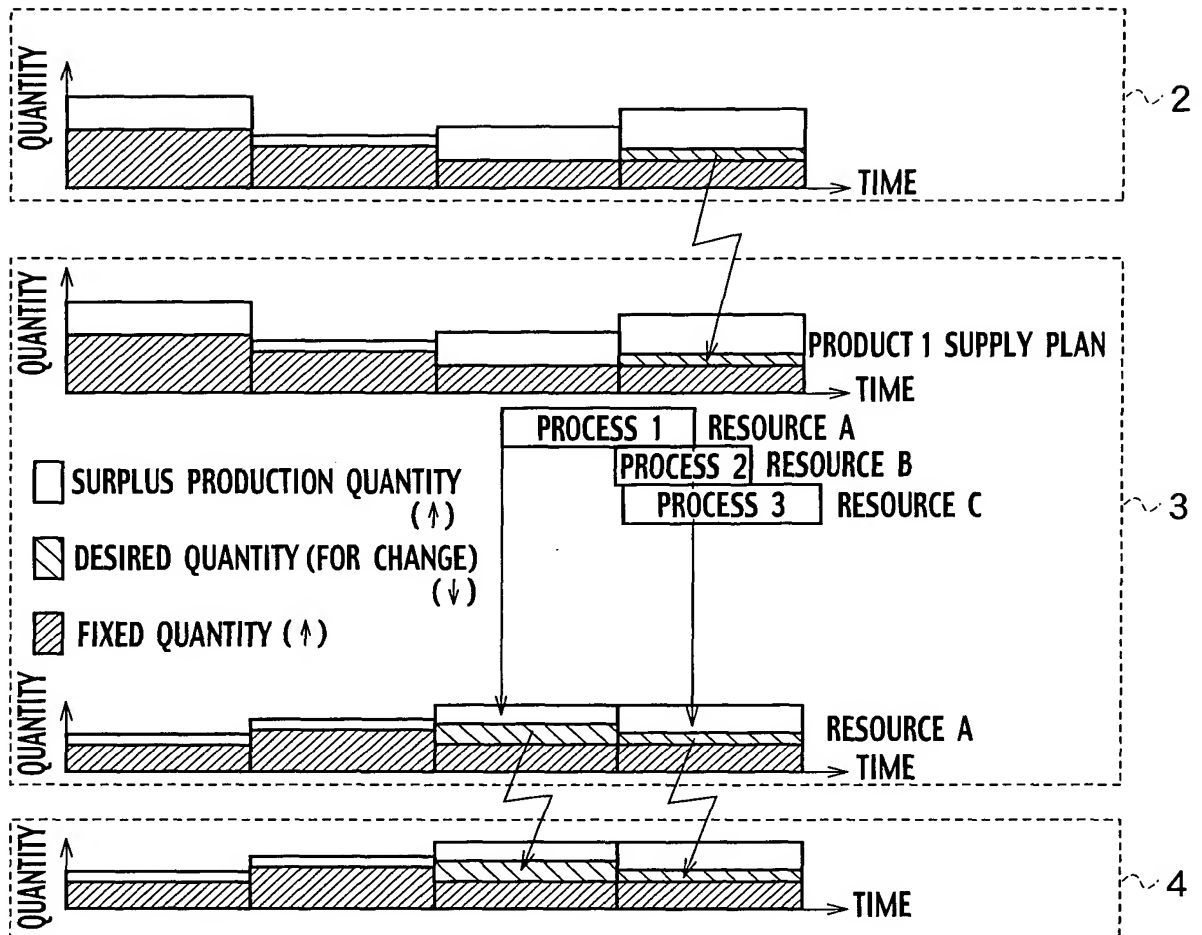
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FIG. 15



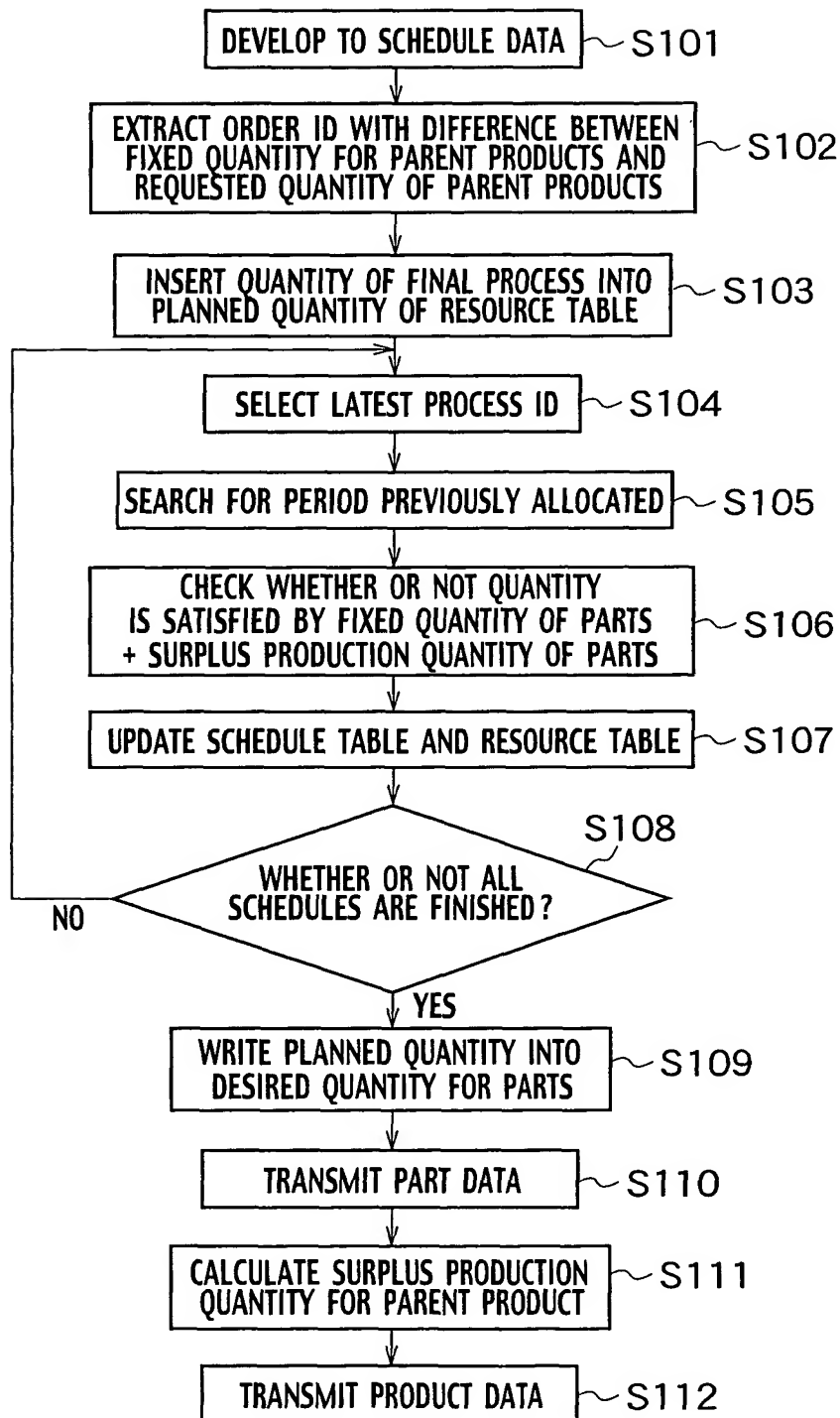
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FIG. 16



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FIG. 17



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FIG. 18

ORDER ID	PROCESS ID	START DATE	END DATE	OFFSET	RESOURCE ID	QUANTITY
A-2	A001	-	-	0	R01	2
A-2	A002	1/11	1/20	1	R02	4
B-3	B001	-	-	0	R01	5
B-3	B002	-	-	1	R02	5
B-3	B003	1/21	1/31	2	R01	3

FIG. 19

RESOURCE ID	START DATE	END DATE	FIXED QUANTITY OF PARTS	DESIRED QUANTITY FOR PARTS (FOR CHANGE)	SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R01	1/1	1/10	10	0	0	0
R01	1/11	1/20	10	0	0	0
R01	1/21	1/31	10	0	0	3
R02	1/1	1/10	0	0	2	0
R02	1/11	1/20	0	0	6	4
R02	1/21	1/31	0	0	10	0

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**FIG. 20**

ORDER ID	PROCESS ID	START DATE	END DATE	OFFSET	RESOURCE ID	QUANTITY
A-2	A001	-	-	0	R01	2
A-2	A002	1/11	1/20	1	R02	4
B-3	B001	-	-	0	R01	5
B-3	B002	1/19	1/29	1	R02	5
B-3	B003	1/21	1/31	2	R01	3

**FIG. 21**

RESOURCE ID	START DATE	END DATE	FIXED QUANTITY OF PARTS	DESIRED QUANTITY FOR PARTS (FOR CHANGE)	SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R01	1/1	1/10	10	0	0	0
R01	1/11	1/20	10	0	0	0
R01	1/21	1/31	10	0	0	3
R02	1/1	1/10	0	0	2	0
R02	1/11	1/20	0	0	6	4 + 1
R02	1/21	1/31	0	0	10	0 + 4

**FIG. 22**

ORDER ID	PROCESS ID	START DATE	END DATE	OFFSET	RESOURCE ID	QUANTITY
A-2	A001	-	-	0	R01	2
A-2	A002	1/11	1/20	1	R02	4
B-3	B001	1/18	1/28	0	R01	5
B-3	B002	1/19	1/29	1	R02	5
B-3	B003	1/21	1/31	2	R01	3

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FIG. 23

RESOURCE ID	START DATE	END DATE	FIXED QUANTITY OF PARTS	DESIRED QUANTITY FOR PARTS (FOR CHANGE)	SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R01	1/1	1/10	10	0	0	0
R01	1/11	1/20	10	0	0	0 + 1
R01	1/21	1/31	10	0	0	3 + 4
R02	1/1	1/10	0	0	2	0
R02	1/11	1/20	0	0	6	5
R02	1/21	1/31	0	0	10	4

FIG. 24

ORDER ID	PROCESS ID	START DATE	END DATE	OFFSET	RESOURCE ID	QUANTITY
A-2	A001	1/10	1/19	0	R01	2
A-2	A002	1/11	1/20	1	R02	4
B-3	B001	1/18	1/28	0	R01	5
B-3	B002	1/19	1/29	1	R02	5
B-3	B003	1/21	1/31	2	R01	3

FIG. 25

RESOURCE ID	START DATE	END DATE	FIXED QUANTITY OF PARTS	DESIRED QUANTITY FOR PARTS (FOR CHANGE)	SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R01	1/1	1/10	10	0	0	0
R01	1/11	1/20	10	0	0	1 + 2
R01	1/21	1/31	10	0	0	7
R02	1/1	1/10	0	0	2	0
R02	1/11	1/20	0	0	6	5
R02	1/21	1/31	0	0	10	4



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**FIG. 26**

RESOURCE ID	START DATE	END DATE	FIXED QUANTITY OF PARTS	DESIRED QUANTITY FOR PARTS (FOR CHANGE)	SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R01	1/1	1/10	10	0	0	0
R01	1/11	1/20	10	3	0	3
R01	1/21	1/31	10	7	0	7
R02	1/1	1/10	0	0	2	0
R02	1/11	1/20	0	5	6	5
R02	1/21	1/31	0	4	10	4

**FIG. 27**

RESOURCE ID	START DATE	END DATE	FIXED QUANTITY OF PARTS	DESIRED QUANTITY FOR PARTS (FOR CHANGE)	SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R02	1/1	1/10	0	0	2	0
R02	1/11	1/20	0	5	6	0
R02	1/21	1/31	0	4	10	0

**FIG. 28**

ORDER ID	START DATE	END DATE	PRODUCT ID	FIXED QUANTITY FOR PARENT PRODUCTS	REQUESTED QUANTITY (FOR CHANGE) OF PARENT PRODUCTS	SURPLUS PRODUCTION QUANTITY FOR PARENT PRODUCTS
A-1	1/1	1/10	A	0	0	1
A-2	1/11	1/20	A	2	0	0
A-3	1/21	1/31	A	0	0	3
B-1	1/1	1/10	B	0	0	2
B-2	1/11	1/20	B	0	0	1
B-3	1/21	1/31	B	5	0	2

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FIG. 29

ORDER ID	START DATE	END DATE	PRODUCT ID	FIXED QUANTITY FOR PARENT PRODUCTS	REQUESTED QUANTITY OF PARENT PRODUCTS	SURPLUS PRODUCTION QUANTITY FOR PARENT PRODUCTS	PREDICTED DEMAND QUANTITY	CERTAINTY FACTOR
A-1	1/1	1/10	A	0	0	0	0	0
A-2	1/11	1/20	A	0	2	0	3	0.5
A-3	1/21	1/31	A	0	0	0	5	0.2
B-1	1/1	1/10	B	0	0	0	0	0
B-2	1/11	1/20	B	0	0	0	0	0
B-3	1/21	1/31	B	0	5	0	3	0.2

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FIG. 30

ORDER ID	START DATE	END DATE	PRODUCT ID	FIXED QUANTITY FOR PARENT PRODUCTS	REQUESTED QUANTITY OF PARENT PRODUCTS	SURPLUS PRODUCTION QUANTITY FOR PARENT PRODUCTS	PREDICTED DEMAND QUANTITY	CERTAINTY FACTOR	INSIDE QUANTITY
A-1	1/1	1/10	A	0	0	0	0	0	0
A-2	1/11	1/20	A	0	2	0	3	0.5	2.5
A-3	1/21	1/31	A	0	0	0	5	0.2	1
B-1	1/1	1/10	B	0	0	0	0	0	0
B-2	1/11	1/20	B	0	0	0	0	0	0
B-3	1/21	1/31	B	0	5	0	3	0.2	5

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FIG. 31

RESOURCE ID	START DATE	END DATE	FIXED QUANTITY OF PARTS	DESIRED QUANTITY FOR PARTS (FOR CHANGE)	SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R01	1/1	1/10	10	0	0	0
R01	1/11	1/20	10	0	0	0
R01	1/21	1/31	10	0	0	0
R02	1/1	1/10	0	0	2	0
R02	1/11	1/20	0	0	6	0
R02	1/21	1/31	0	0	10	0

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FIG. 32

ORDER ID	PROCESS ID	START DATE	END DATE	OFFSET	RESOURCE ID	QUANTITY
A-2	A001	-	-	0	R01	2.5=3
A-2	A002	1/11	1/20	1	R02	5
A-3	A001	-	-	0	R01	1
A-3	A002	1/21	1/31	1	R02	2
B-3	B001	-	-	0	R01	5
B-3	B002	-	-	1	R02	5
B-3	B003	1/21	1/31	2	R01	3

FIG. 33

RESOURCE ID	START DATE	END DATE	FIXED QUANTITY OF PARTS	DESIRED QUANTITY FOR PARTS (FOR CHANGE)	SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R01	1/1	1/10	10	0	0	0
R01	1/11	1/20	10	0	0	0
R01	1/21	1/31	10	0	0	3
R02	1/1	1/10	0	0	2	0
R02	1/11	1/20	0	0	6	5
R02	1/21	1/31	0	0	10	2

FIG. 34

ORDER ID	PROCESS ID	START DATE	END DATE	OFFSET	RESOURCE ID	QUANTITY
A-2	A001	1/10	1/19	0	R01	3
A-2	A002	1/11	1/20	1	R02	5
A-3	A001	1/20	1/30	0	R01	1
A-3	A002	1/21	1/31	1	R02	2
B-3	B001	1/17	1/27	0	R01	5
B-3	B002	1/18	1/28	1	R02	5
B-3	B003	1/21	1/31	2	R01	3

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FIG. 35

RESOURCE ID	START DATE	END DATE	FIXED QUANTITY OF PARTS	DESIRED QUANTITY FOR PARTS	SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R01	1/1	1/10	10	0	0	0
R01	1/11	1/20	10	0	0	2
R01	1/21	1/31	10	0	0	7
R02	1/1	1/10	0	0	2	0
R02	1/11	1/20	0	2	6	6
R02	1/21	1/31	0	10	10	6

FIG. 36

ORDER ID	START DATE	END DATE	PRODUCT ID	PRICE @ FIXED QUANTITY FOR PARENT PRODUCTS	PRICE @ REQUESTED QUANTITY OF PARENT PRODUCTS	PRICE @ SURPLUS PRODUCTION QUANTITY FOR PARENT PRODUCTS
A-1	1/1	1/10	A	0	0	0
A-2	1/11	1/20	A	0	2 @ 50	0
A-3	1/21	1/31	A	0	0	0
B-1	1/1	1/10	B	0	0	0
B-2	1/11	1/20	B	0	0	0
B-3	1/21	1/31	B	0	5 @ 60	0

FIG. 37

RESOURCE ID	START DATE	END DATE	PRICE @ FIXED QUANTITY OF PARTS	PRICE @ DESIRED QUANTITY FOR PARTS	PRICE @ SURPLUS PRODUCTION QUANTITY OF PARENT PRODUCTS	PLANNED QUANTITY
R01	1/1	1/10	10 @ 20	0	0	0
R01	1/11	1/20	10 @ 20	0	0	0
R01	1/21	1/31	10 @ 20	0	0	0
R02	1/1	1/10	0	0	2 @ 10	0
R02	1/11	1/20	0	0	6 @ 10	0
R02	1/21	1/31	0	0	10 @ 10	0

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**FIG. 38**

ORDER ID	PROCESS ID	START DATE	END DATE	OFFSET	RESOURCE ID	QUANTITY	COST
A-2	A001	-	-	0	R01	2	
A-2	A002	1/1	1/20	1	R02	4	@ 10
B-3	B001	-	-	0	R01	5	
B-3	B002	-	-	1	R02	5	
B-3	B003	1/21	1/31	2	R01	3	@ 20

**FIG. 39**

RESOURCE ID	START DATE	END DATE	PRICE @ FIXED QUANTITY OF PARTS	PRICE @ DESIRED QUANTITY FOR PARTS	PRICE @ SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R01	1/1	1/10	10 @ 20	0	0	0
R01	1/11	1/20	10 @ 20	0	0	0
R01	1/21	1/31	10 @ 20	0	0	3
R02	1/1	1/10	0	0	2 @ 10	0
R02	1/11	1/20	0	0	6 @ 10	4
R02	1/21	1/31	0	0	10 @ 10	0

**FIG. 40**

ORDER ID	PROCESS ID	START DATE	END DATE	OFFSET	RESOURCE ID	QUANTITY	COST
A-2	A001	-	-	0	R01	2	
A-2	A002	1/11	1/20	1	R02	4	@ 10
B-3	B001	-	-	0	R01	5	
B-3	B002	1/19	1/29	1	R02	5	@ 10
B-3	B003	1/21	1/31	2	R01	3	@ 20

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FIG. 41

RESOURCE ID	START DATE	END DATE	PRICE @ FIXED QUANTITY OF PARTS	PRICE @ DESIRED QUANTITY FOR PARTS	PRICE @ SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R01	1/1	1/10	10 @ 20	0	0	0
R01	1/11	1/20	10 @ 20	0	0	0
R01	1/21	1/31	10 @ 20	0	0	3
R02	1/1	1/10	0	0	2 @ 10	0
R02	1/11	1/20	0	0	6 @ 10	4 + 1
R02	1/21	1/31	0	0	10 @ 10	0 + 4

FIG. 42

ORDER ID	PROCESS ID	START DATE	END DATE	OFFSET	RESOURCE ID	QUANTITY	COST
A-2	A001	-	-	0	R01	2	
A-2	A002	1/11	1/20	1	R02	4	@ 10
B-3	B001	1/18	1/28	0	R01	5	@ 20
B-3	B002	1/19	1/29	1	R02	5	@ 10
B-3	B003	1/21	1/31	2	R01	3	@ 20

FIG. 43

RESOURCE ID	START DATE	END DATE	PRICE @ FIXED QUANTITY OF PARTS	PRICE @ DESIRED QUANTITY FOR PARTS	PRICE @ SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R01	1/1	1/10	10 @ 20	0	0	0
R01	1/11	1/20	10 @ 20	0	0	0 + 1
R01	1/21	1/31	10 @ 20	0	0	3 + 4
R02	1/1	1/10	0	0	2 @ 10	0
R02	1/11	1/20	0	0	5 @ 10	5
R02	1/21	1/31	0	0	10 @ 10	4



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FIG. 44

ORDER ID	PROCESS ID	STAR DATE	END DATE	OFFSET	RESOURCE ID	QUANTITY	COST
A-2	A001	1/10	1/19	0	R01	2	@ 20
A-2	A002	1/11	1/20	1	R02	4	@ 10
B-3	B001	1/18	1/28	0	R01	5	@ 20
B-3	B002	1/19	1/29	1	R02	5	@ 10
B-3	B003	1/21	1/31	2	R01	3	@ 20

FIG. 45

RESOURCE ID	START DATE	END DATE	PRICE @ FIXED QUANTITY OF PARTS	PRICE @ DESIRED QUANTITY FOR PARTS	PRICE @ SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R01	1/1	1/10	10 @ 20	0	0	0
R01	1/11	1/20	10 @ 20	0	0	1 + 2
R01	1/21	1/31	10 @ 20	0	0	7
R02	1/1	1/10	0	0	2 @ 10	0
R02	1/11	1/20	0	0	5 @ 10	5
R02	1/21	1/31	0	0	10 @ 10	4

FIG. 46

RESOURCE ID	START DATE	END DATE	PRICE @ FIXED QUANTITY OF PARTS	PRICE @ DESIRED QUANTITY FOR PARTS	PRICE @ SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R01	1/1	1/10	10 @ 20	0	0	0
R01	1/11	1/20	10 @ 20	0	0	3
R01	1/21	1/31	10 @ 20	0	0	7
R02	1/1	1/10	0	0	2 @ 10	0
R02	1/11	1/20	0	1	5 @ 10	5
R02	1/21	1/31	0	7	10 @ 10	4

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FIG. 47

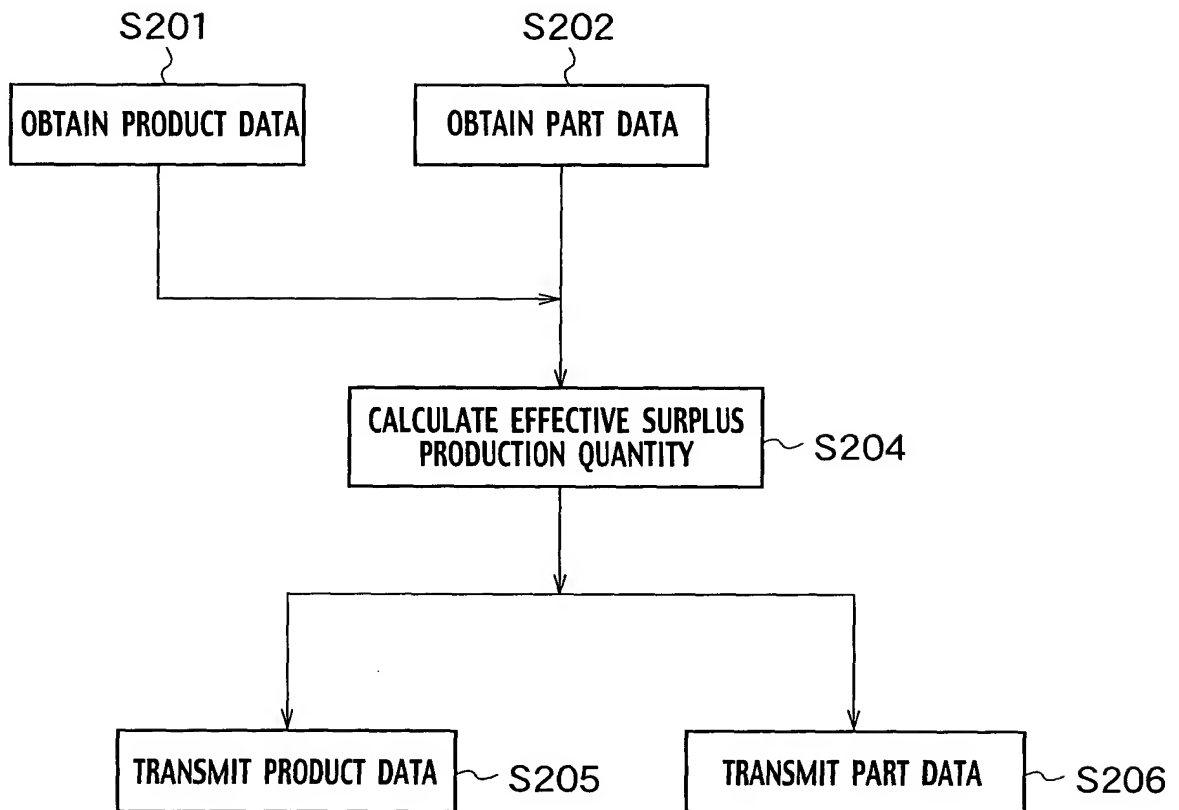
ORDER ID	START DATE	END DATE	PRODUCT ID	PRICE @ FIXED QUANTITY FOR PARENT PRODUCTS	PRICE @ REQUESTED QUANTITY OF PARENT PRODUCTS	PRICE @ SURPLUS PRODUCTION QUANTITY FOR PARENT PRODUCTS
A-1	1/1	1/10	A	0	0	1 @ 40
A-2	1/11	1/20	A	2 @ 50	0	0 @ 50
A-3	1/21	1/31	A	0	0	3 @ 50
B-1	1/1	1/10	B	0	0	2 @ 40
B-2	1/11	1/20	B	0	0	1 @ 60
B-3	1/21	1/31	B	5 @ 60	0	2 @ 60

FIG. 48

RESOURCE ID	START DATE	END DATE	PRICE @ FIXED QUANTITY OF PARTS	PRICE @ DESIRED QUANTITY FOR PARTS	PRICE @ SURPLUS PRODUCTION QUANTITY OF PARTS	PLANNED QUANTITY
R02	1/1	1/10	0	0	2 @ 10	0
R02	1/11	1/20	0	5 @ 10	5 @ 10	0
R02	1/21	1/31	0	4 @ 10	10 @ 10	0

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FIG. 49



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FIG. 50

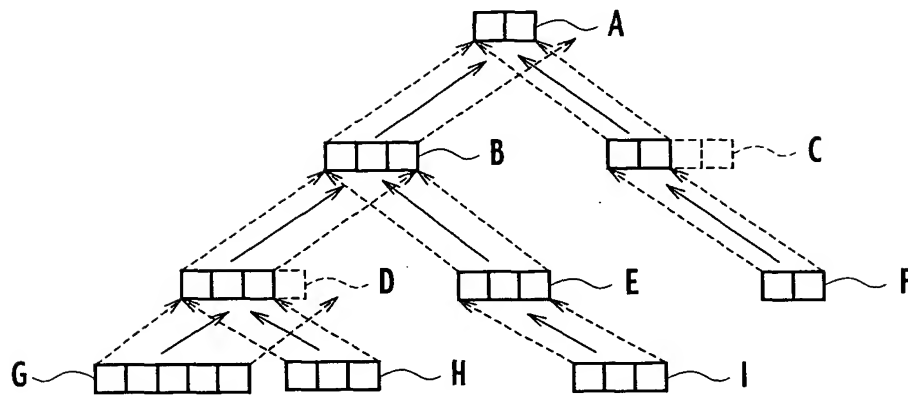


FIG. 51

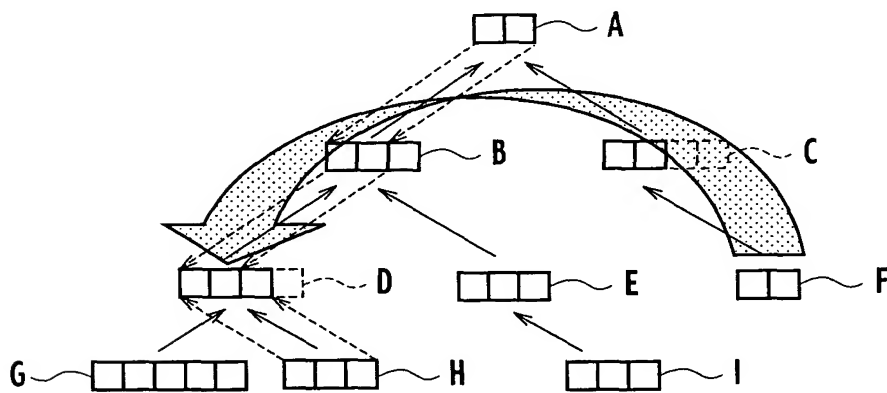
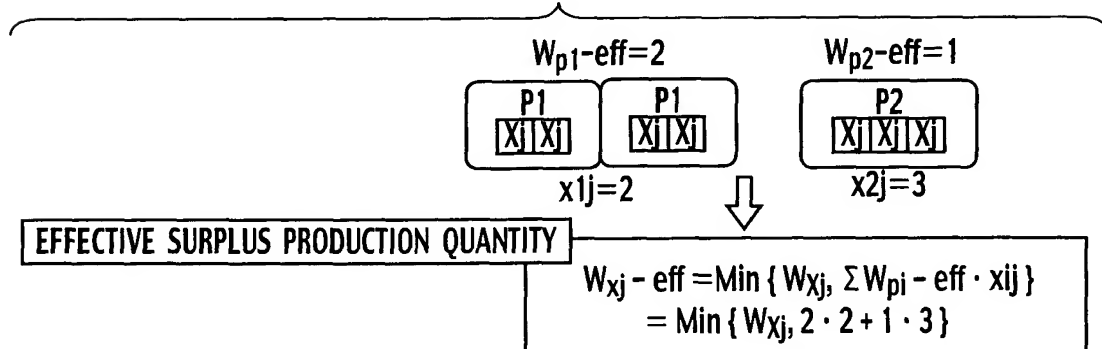


FIG. 52



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**FIG. 53A**

	EFFECTIVE SURPLUS PRODUCTION QUANTITY	
TERM	P1	P2
1	0.2	0.1
2	0.1	0.1
3	0.2	0.2
4	0.1	0.3
5	0.2	0.4

**FIG. 53B**

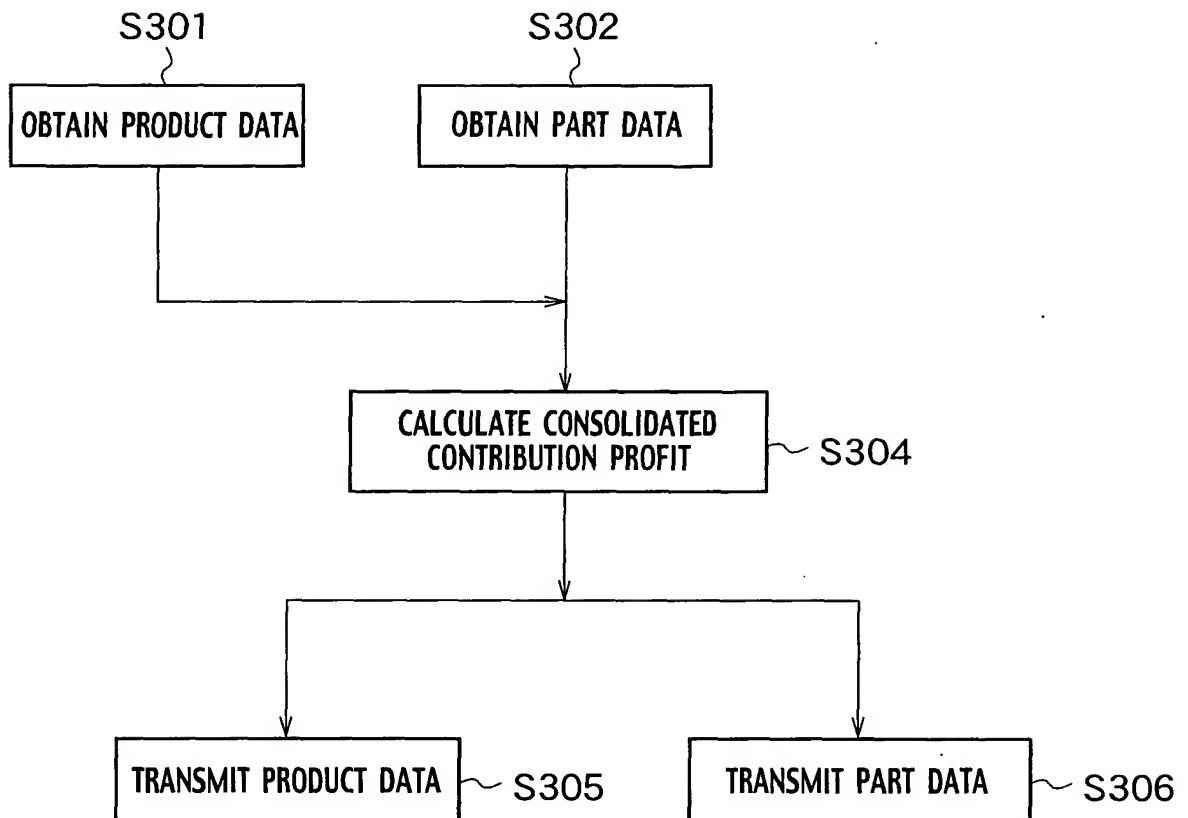
	SURPLUS PRODUCTION QUANTITY		
TERM	X1	X2	X3
1	0.4	0.3	0.2
2	0.5	0.3	0.3
3	0.4	0.3	0.4
4	0.5	0.3	0.5
5	0.4	0.3	0.6

**FIG. 53C**

	EFFECTIVE SURPLUS PRODUCTION QUANTITY		
TERM	X1	X2	X3
1	0.2	0.3	0.1
2	0.1	0.2	0.1
3	0.2	0.3	0.2
4	0.1	0.3	0.3
5	0.2	0.3	0.4

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FIG. 54



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FIG. 55

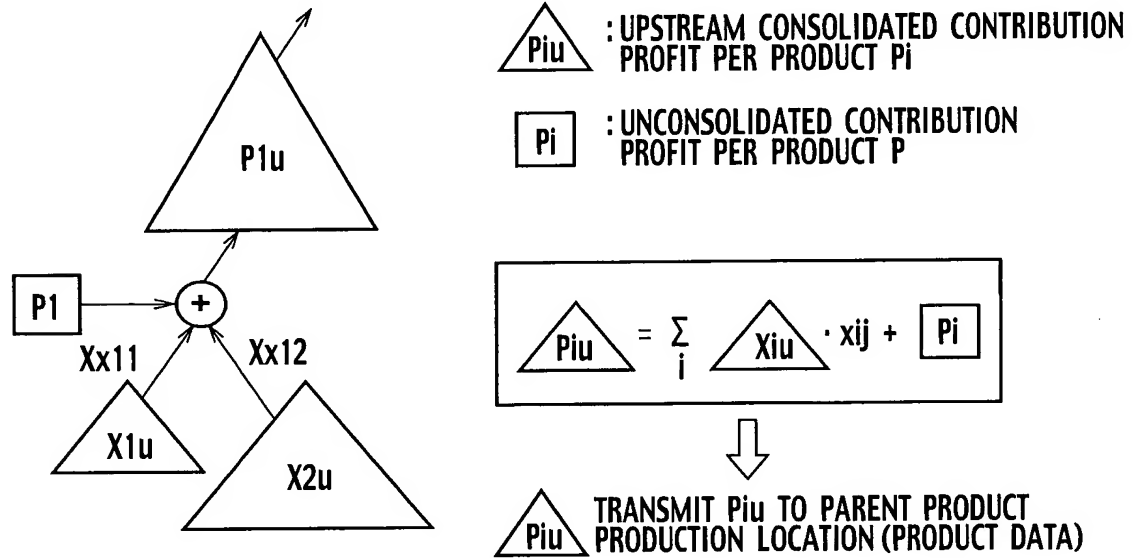
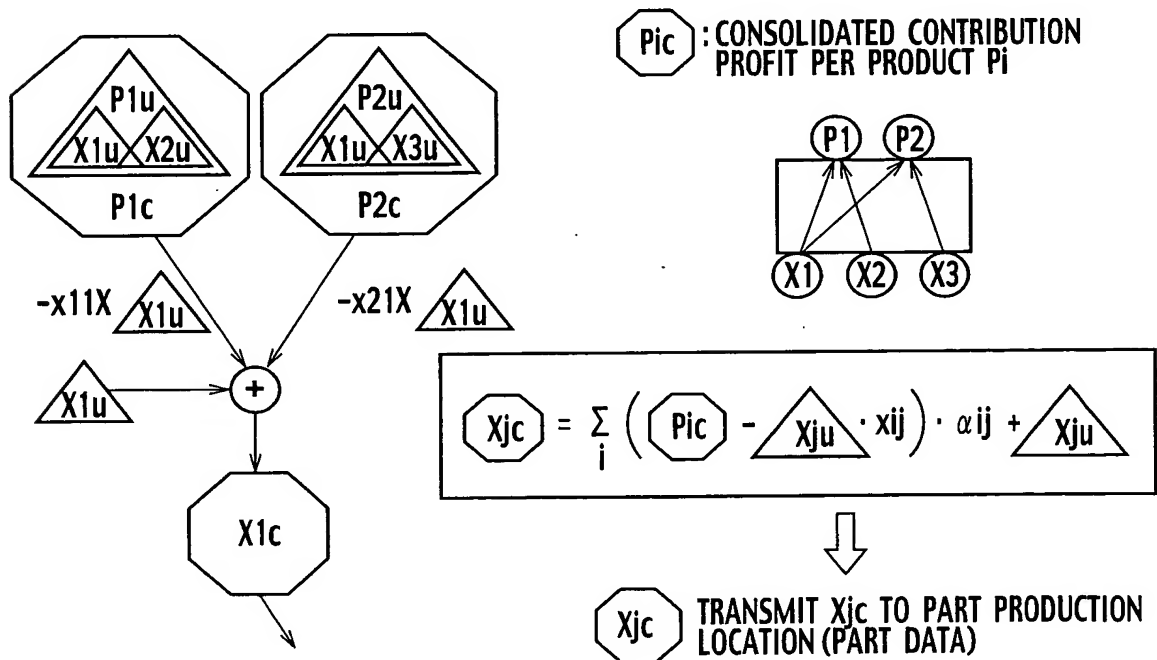


FIG. 56



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FIG. 57

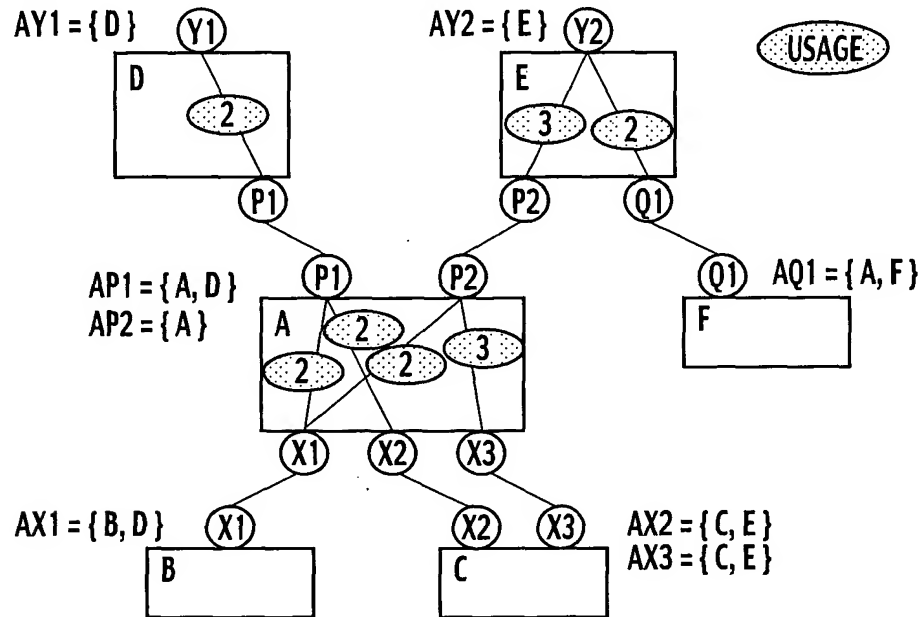


FIG. 58

PRODUCTION LOCATION	PRODUCT ID	BELONGING DEPARTMENT SET	
B	X1	B	D
C	X2	C	E
	X3	C	E
A	P1	A	D
	P2	A	
F	Q1	A	F
D	Y1	D	
E	Y2	E	

FIG. 59

PRODUCTION LOCATION	PRODUCT ID	UPSTREAM BELONGING DEPARTMENT SET					
B	X1	B	D				
C	X2	C	E				
	X3	C	E				
A	P1	A	B	C	D	E	
	P2	A	B	C	D	E	
F	Q1	A	F				
D	Y1	A	B	C	D	E	
E	Y2	A	B	C	D	E	F



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FIG. 60

PRODUCTION LOCATION	PRODUCT ID	CONSOLIDATED BELONGING DEPARTMENT SET					
B	X1	A	B	C	D	E	F
C	X2	A	B	C	D	E	
	X3	A	B	C	D	E	F
A	P1	A	B	C	D	E	
	P2	A	B	C	D	E	F
F	Q1	A	B	C	D	F	F
D	Y1	A	B	C	D	E	
E	Y2	A	B	C	D	E	F

FIG. 61

PRODUCTION LOCATION	PRODUCT ID		CONSOLIDATED BELONGING DEPARTMENT SET						
B	X1	BELONGING DEPARTMENT	AX1	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RX1		1.00		1.00		
C	X2	BELONGING DEPARTMENT	AX2	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RX2			1.00		1.00	
	X3	BELONGING DEPARTMENT	AX3	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RX3			1.00		1.00	
A	P1	BELONGING DEPARTMENT	AP1	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RP1	1.00			1.00		
	P2	BELONGING DEPARTMENT	AP2	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RP2	1.00					
F	Q1	BELONGING DEPARTMENT	AQ1	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RQ1	1.00					1.00
D	Y1	BELONGING DEPARTMENT	AY1	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RY1				1.00		
E	Y2	BELONGING DEPARTMENT	AY2	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RY2					1.00	

FIG. 62

PRODUCT ID	PART ID	USAGE
P1	X1	2
	X2	2
P2	X1	2
	X3	3
Y1	P1	2
Y2	P2	3
	Q1	2

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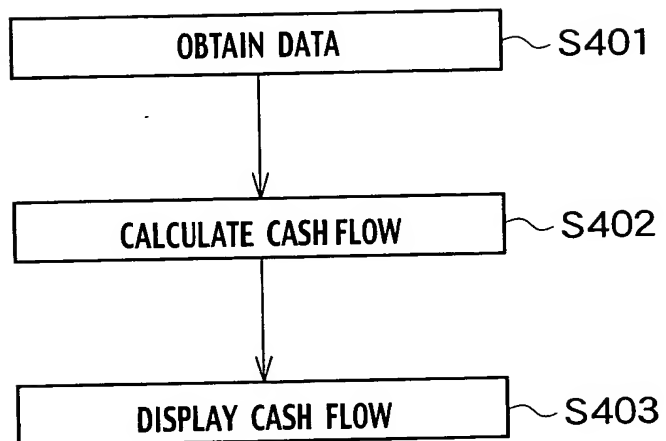
FIG. 63

PRODUCTION LOCATION	PRODUCT ID		CONSOLIDATED BELONGING DEPARTMENT SET						
B	X1	BELONGING DEPARTMENT	AuX1	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuX1		1.00		1.00		
C	X2	BELONGING DEPARTMENT	AuX2	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuX2			1.00		1.00	
	X3	BELONGING DEPARTMENT	AuX3	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuX3			1.00		1.00	
A	P1	BELONGING DEPARTMENT	AuP1	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuP1	1.00	2.00	2.00	3.00	2.00	
	P2	BELONGING DEPARTMENT	AuP2	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuP2	1.00	2.00	3.00	2.00	3.00	
F	Q1	BELONGING DEPARTMENT	AuQ1	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuQ1	1.00					1.00
D	Y1	BELONGING DEPARTMENT	AuY1	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuY1	2.00	4.00	4.00	7.00	4.00	
E	Y2	BELONGING DEPARTMENT	AuY2	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuY2	5.00	6.00	9.00	6.00	10.00	2.00

FIG. 64

PRODUCTION LOCATION	PRODUCT ID		CONSOLIDATED BELONGING DEPARTMENT SET						
B	X1	BELONGING DEPARTMENT	AuX1	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuX1	0.67	1.00	1.25	1.38	1.33	0.17
C	X2	BELONGING DEPARTMENT	AuX2	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuX2	0.50	1.00	1.00	1.75	1.00	
	X3	BELONGING DEPARTMENT	AuX3	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuX3	0.56	0.67	1.00	0.67	1.11	0.22
A	P1	BELONGING DEPARTMENT	AuP1	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuP1	1.00	2.00	2.00	3.50	2.00	
	P2	BELONGING DEPARTMENT	AuP2	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuP2	1.67	2.00	3.00	2.00	3.33	0.67
F	Q1	BELONGING DEPARTMENT	AuQ1	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuQ1	2.50	3.00	4.50	3.00	5.00	1.00
D	Y1	BELONGING DEPARTMENT	AuY1	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuY1	2.00	4.00	4.00	7.00	4.00	
E	Y2	BELONGING DEPARTMENT	AuY2	A	B	C	D	E	F
		CONTRIBUTION PROFIT	RuY2	5.00	6.00	9.00	6.00	10.00	2.00

**FIG. 65**



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FIG. 66

TERM	PRODUCT 1					PRODUCT 2				
	PLANNED SALES QUANTITY	PLANNED PRODUCTION QUANTITY	FIXED SALES QUANTITY	SURPLUS PRODUCTION QUANTITY	INVENTORY QUANTITY	PLANNED SALES QUANTITY	PLANNED PRODUCTION QUANTITY	FIXED SALES QUANTITY	SURPLUS PRODUCTION QUANTITY	INVENTORY QUANTITY
0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	1	1	0.6	0	0.4
2	0	0	0	0	0	1	1	1	0	0.4
3	0	0	0	0	0	1	1	1	0	0.4
4	0.4	0.4	0	0	0.4	0.6	0.6	1	0	0
5	1	1	0	0	1.4	0	0	0	0	0
6	0	0	1	0	0.4	1	1	0	0	1
7	1	1	0	0	1.4	0	0	0	0	1
8	0	0	0	0	1.4	1	1	0	0	2
9	1	1	0	0	2.4	0	0	2	0	0
10	1	1	3.4	0	0	0	0	0	0	0
11	0.5	0	0	0.9	0	0.5	0.1	0	0.9	0.1
12	0	0	0	0	0	1	1	0	0	1.1
13	0	0	0	0	0	1	1	0	0	2.1
14	0	0	0	0.5	0	0.5	0.5	0	0.5	2.6
15	0	0	0	0.5	0	0.5	0.5	0	0.5	3.1
16	0	0	0	0.5	0	0.5	0.5	0	0.5	3.6
17	0	0	0	0.5	0	0.5	0.5	0	0.5	4.1
18	0	0	0	0.5	0	0.5	0.5	0	0.5	4.6
19	0	0	0	0.5	0	0.5	0.5	0	0.5	5.1
20	0	0	0	1	0	0	0	0	1	5.1
21	0	0	0	1	0	0	0	0	1	5.1
22	0	0	0	1	0	0	0	1	1	4.1
23	0	0	0	1	0	0	0	1	1	3.1
24	0	0	0	1	0	0	0	1	1	2.1
25	0	0	0	1	0	0	0	1	1	1.1
26	0	0	0	1	0	0	0	0	1	1.1
27	0	0	0	1	0	0	0	0	1	1.1
28	0	0	0	1	0	0	0	0	1	1.1
29	0	0	0	1	0	0	0	0	1	1.1

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**FIG. 67**

TERM	PRODUCT 1			PRODUCT 2		
	INVENTORY QUANTITY	CARRIED-OVER INVENTORY QUANTITY	SALABLE INVENTORY QUANTITY	INVENTORY QUANTITY	CARRIED-OVER INVENTORY QUANTITY	SALABLE INVENTORY QUANTITY
0	0	0	0	0	0	0
1	0	0	0	0.4	0.4	0
2	0	0	0	0.4	0.4	0
3	0	0	0	0.4	0.4	0
4	0.4	0.4	0	0	0	0
5	1.4	1.4	0	0	0	0
6	0.4	0.4	0	1	1	0
7	1.4	1.4	0	1	1	0
8	1.4	1.4	0	2	2	0
9	2.4	2.4	0	0	0	0
10	0	0	0	0	0	0
11	0	0	0	0.1	0	0.1
12	0	0	0	1.1	0	1.1
13	0	0	0	2.1	1	1.1
14	0	0	0	2.6	1.5	1.1
15	0	0	0	3.1	2	1.1
16	0	0	0	3.6	2.5	1.1
17	0	0	0	4.1	3	1.1
18	0	0	0	4.6	3.5	1.1
19	0	0	0	5.1	4	1.1
20	0	0	0	5.1	4	1.1
21	0	0	0	5.1	4	1.1
22	0	0	0	4.1	3	1.1
23	0	0	0	3.1	2	1.1
24	0	0	0	2.1	1	1.1
25	0	0	0	1.1	0	1.1
26	0	0	0	1.1	0	1.1
27	0	0	0	1.1	0	1.1
28	0	0	0	1.1	0	1.1
29	0	0	0	1.1	0	1.1

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FIG. 68

TERM	PRODUCT 1			PRODUCT 2		
	PRICE	DIRECT PRODUCTION COST	INVENTORY COST COEFFICIENT	PRICE	DIRECT PRODUCTION COST	INVENTORY COST COEFFICIENT
0	0	0	0	0	0	0
1	0.6	0.3	0.01	0.5	0.3	0.01
2	0.595	0.3	0.01	0.496	0.3	0.01
3	0.59	0.3	0.01	0.492	0.3	0.01
4	0.585	0.3	0.01	0.488	0.3	0.01
5	0.58	0.3	0.01	0.484	0.3	0.01
6	0.575	0.3	0.01	0.48	0.3	0.01
7	0.57	0.3	0.01	0.476	0.3	0.01
8	0.565	0.3	0.01	0.472	0.3	0.01
9	0.56	0.3	0.01	0.468	0.3	0.01
10	0.555	0.3	0.01	0.464	0.3	0.01
11	0.565	0.3	0.01	0.46	0.3	0.01
12	0.575	0.3	0.01	0.456	0.3	0.01
13	0.585	0.3	0.01	0.452	0.3	0.01
14	0.595	0.3	0.01	0.448	0.3	0.01
15	0.605	0.3	0.01	0.444	0.3	0.01
16	0.615	0.3	0.01	0.44	0.3	0.01
17	0.625	0.3	0.01	0.436	0.3	0.01
18	0.635	0.3	0.01	0.432	0.3	0.01
19	0.645	0.3	0.01	0.428	0.3	0.01
20	0.655	0.3	0.01	0.424	0.3	0.01
21	0.665	0.3	0.01	0.42	0.3	0.01
22	0.675	0.3	0.01	0.416	0.3	0.01
23	0.685	0.3	0.01	0.412	0.3	0.01
24	0.695	0.3	0.01	0.408	0.3	0.01
25	0.705	0.3	0.01	0.404	0.3	0.01
26	0.715	0.3	0.01	0.4	0.3	0.01
27	0.725	0.3	0.01	0.396	0.3	0.01
28	0.735	0.3	0.01	0.392	0.3	0.01
29	0.745	0.3	0.01	0.388	0.3	0.01

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FIG. 69A

	DEPARTMENT EXPENDITURE			SALES			MARGINAL PROFIT		
TERM	COMMON FIXED COST	TOTAL INVENTORY COST	FIXED RESOURCE COST	SALES PLAN	PRODUC- TION PLAN	FIXED SALES	SALES PLAN	PRODUC- TION PLAN	FIXED SALES
0									
1	0.1	0.004	0.3	0.5	0.5	0.3	0.5	0.5	0.3
2	0.1	0.004	0.2975	0.496	0.496	0.496	0.196	0.196	0.196
3	0.1	0.004	0.2925	0.492	0.492	0.492	0.1945	0.1945	0.1945
4	0.1	0.004	0.2875	0.5268	0.5268	0.488	0.2343	0.2343	0.1955
5	0.1	0.014	0.2825	0.58	0.58	0	0.2925	0.2925	0
6	0.1	0.014	0.2775	0.48	0.48	0.575	0.1975	0.1975	0.2925
7	0.1	0.024	0.2725	0.57	0.57	0	0.2925	0.2925	0
8	0.1	0.034	0.2675	0.472	0.472	0	0.1995	0.1995	0
9	0.1	0.024	0.2656	0.56	0.56	0.936	0.2925	0.2925	0.401
10	0.1	0	0.02575	0.555	0.555	1.887	0.2925	0.2925	0.9945
11	0.1	0.001	0.2525	0.5125	0.5125	0	0.255	0.02025	0
12	0.1	0.011	0.2475	0.456	0.456	0	0.2035	0.2035	0
13	0.1	0.021	0.12125	0.452	0.452	0	0.2045	0.2045	0
14	0.1	0.026	0.11875	0.224	0.224	0	0.10275	0.10275	0
15	0.1	0.031	0.11625	0.222	0.222	0	0.10325	0.10325	0
16	0.1	0.036	0.11375	0.22	0.22	0	0.10375	0.10375	0
17	0.1	0.041	0.11125	0.218	0.218	0	0.10425	0.10425	0
18	0.1	0.046	0.10875	0.216	0.216	0	0.10475	0.10475	0
19	0.1	0.051	0	0.214	0.214	0	0.10525	0.10525	0
20	0.1	0.051	0	0	0	0	0	0	0
21	0.1	0.051	0	0	0	0	0	0	0
22	0.1	0.041	0	0	0	0.416	0	0	0.2135
23	0.1	0.031	0	0	0	0.412	0	0	0.2145
24	0.1	0.021	0	0	0	0.408	0	0	0.2155
25	0.1	0.011	0	0	0	0.404	0	0	0.2165
26	0.1	0.011	0	0	0	0	0	0	0
27	0.1	0.011	0	0	0	0	0	0	0
28	0.1	0.011	0	0	0	0	0	0	0
29	0.1	0.011	0	0	0	0	0	0	0

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**FIG. 69B**

DEPARTMENT CASH FLOW						
TERM	EXISTING CF	PRODUCTION PLAN CF	SALES PLAN CF	INVENTORY SALES CF AT PRESENT TIME	P1 SURPLUS CAPACITY CF	P2 SURPLUS CAPACITY CF
0						
1	0.196	0.196	0.196	0.196	0.196	0.196
2	0.288	0.288	0.288	0.288	0.288	0.288
3	0.3785	0.3785	0.3785	0.3785	0.3785	0.3785
4	0.47	0.47	0.47	0.47	0.47	0.47
5	0.0685	0.0685	0.0685	0.0685	0.0685	0.0685
6	0.247	0.247	0.247	0.247	0.247	0.247
7	-0.1545	-0.1545	-0.1545	-0.1545	-0.1545	0.02775
8	-0.561	-0.561	-0.561	-0.561	-0.561	-0.37875
9	-0.0165	-0.0165	-0.0165	-0.0165	-0.0165	0.16575
10	1.508	1.508	1.508	1.508	1.508	1.793
11	1.38125	1.42825	1.663	1.42725	1.705	1.8165
12	1.01775	1.53075	1.7655	0.51935	1.8075	2.02275
13	0.64925	1.16225	1.397	1.14645	1.439	1.7585
14	0.402	0.915	1.14975	0.8948	1.368	1.616
15	0.15225	0.66525	0.9	0.64065	1.302	1.4715
16	-0.1	0.413	0.64775	0.384	1.241	1.43075
17	-0.35475	0.15825	0.393	0.12485	1.185	1.3885
18	-0.612	-0.099	0.13575	-0.1368	1.134	1.34475
19	-0.87175	-0.35875	-0.124	-0.40095	1.088	1.2995
20	-1.02275	-0.50975	-0.275	-0.55635	1.3795	1.364
21	-1.17375	-0.66075	-0.426	-0.71175	1.686	1.4295
22	-0.89875	-0.38575	-0.151	-0.44115	2.4335	1.922
23	-0.61775	-0.10475	0.13	-0.16455	3.202	2.4215
24	-0.33075	0.18225	0.417	0.11805	3.9915	2.928
25	-0.03775	0.47525	0.71	0.40665	4.802	3.4415
26	-0.14875	0.36425	0.599	0.29125	5.2235	3.3305
27	-0.25975	0.25325	0.488	0.17585	5.66	3.2195
28	-0.37075	0.14225	0.377	0.06045	6.1115	3.1085
29	-0.48175	0.03125	0.266	-0.05495	6.578	2.9975



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FIG. 70

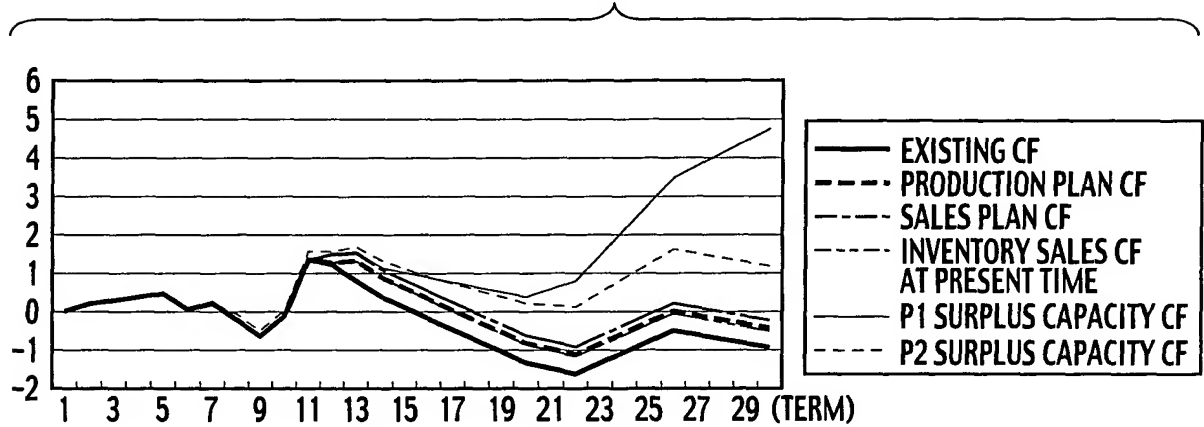
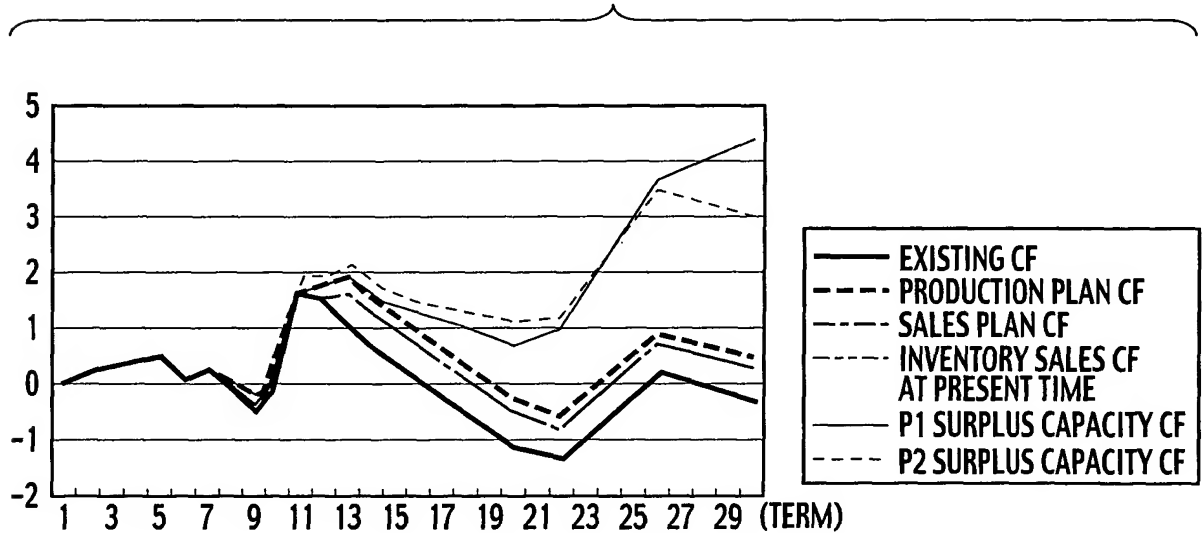


FIG. 71



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FIG. 72

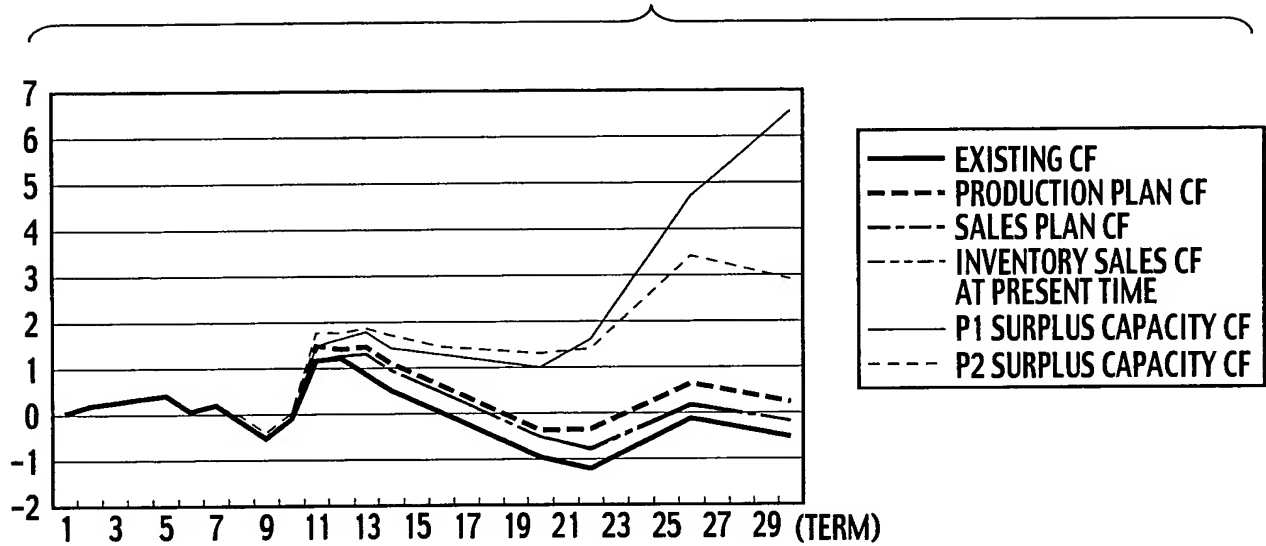
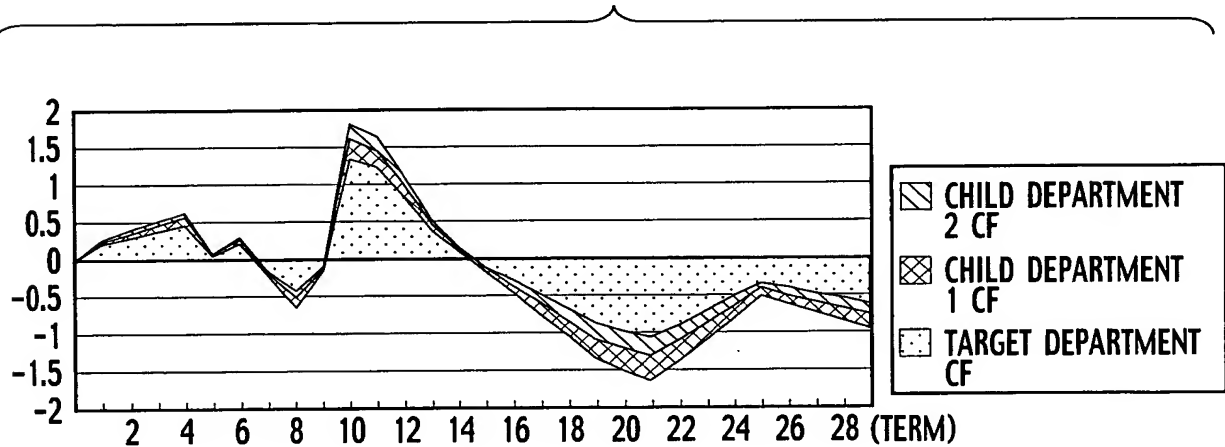


FIG. 73



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FIG. 74

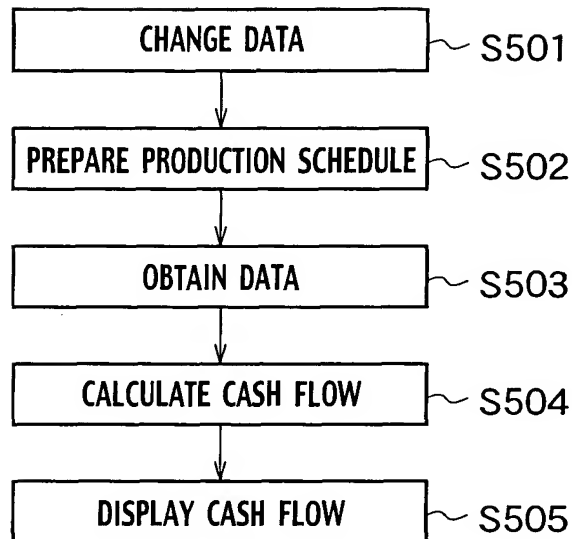


FIG. 75

